SCOTT®
A SCOTT TECHNOLOGIES COMPANY

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ABBREVIATED COMPONENT MAINTENANCE MANUAL
WITH ILLUSTRATED PARTS LIST
OVERBOARD DISCHARGE INDICATOR
P/N 171-12 Series and 171-13

LIST OF REVISIONS

Rev. No.	Orig.	1	2	3	4	5
Rev. Date	Jun 30/99					
Pages	All					

LIST OF EFFECTIVE PAGES

Pg. 1	Jun 30/99	Pg. 3	Jun 30/99	Pg. 5	Jun 30/99
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1. DESCRIPTION AND OPERATION

    A. General

        WARNING: IMPROPER USE OR IMPROPER MAINTENANCE OF THIS EQUIPMENT MAY
        RESULT IN SERIOUS PERSONAL INJURY OR DEATH. ANY SERVICE
        PERFORMED ON AN OVERBOARD DISCHARGE INDICATOR MUST BE DONE
        ONLY BY FACILITIES EXPERIENCED IN, OR BY PERSONNEL KNOWLEDGEABLE
        IN, AVIATION OXYGEN EQUIPMENT.

        WARNING: ALL TOOLS THAT MAY COME IN CONTACT WITH PARTS OF THIS OVERBOARD
        DISCHARGE INDICATOR MUST BE CLEAN AND FREE OF DUST, LINT, FINE
        METAL FILINGS, OIL, GREASE, FLAMMABLE SOLVENTS OR OTHER
        COMBUSTIBLE MATERIALS. THESE MATERIALS IN CONTACT WITH
        PRESSURIZED OXYGEN MAY RESULT IN A FIRE OR EXPLOSION CAUSING
        SERIOUS PERSONAL INJURY OR DEATH.

        WARNING: SUITABLE EYE PROTECTION MUST BE WORN TO PREVENT ACCIDENTAL EYE
        INJURIES WHEN SERVICING THIS EQUIPMENT.

1. DESCRIPTION AND OPERATION, continued

    A. General, continued

    See Figure 1 for a cutaway view.

    The Overboard Discharge Indicators part numbers 171-12 Series and 171-13 are used on aircraft oxygen systems to provide a visual indication of oxygen overboard venting. The Indicator is intended to be installed through the aircraft skin and connected by tubing to the safety-relief device on the regulator or valve that is mounted on the high-pressure cylinder that holds the aviation oxygen supply.

    When pressure in the tubing reaches a specified pressure range, the snap-in disc dislodges. The dislodged disc gives visual indication of oxygen system venting during pre-flight walk-around or other ground checks.

    B. Leading Particulars

    (1) General

    See Figure 2 and Table 1 for reference dimensions and approximate weights.

    The Indicator is intended to be used with aviation oxygen per MIL-PRF-27210. Operating temperature range for the Indicator is -60°F to +160°F (-51°C to +71°C).

    The disc is made from nylon. The body is made from aluminum alloy 2024, with a protective anodize coating.

    (2) P/N 171-12 Series

    Disc dislodges at 80 ±30 psig (0.55 ±0.21 MPa) for all configurations.

    Indicator threads for P/N 171-12 and 171-12-2 are 0.438-20UNJF-3A (male threads) per MS33656E4.
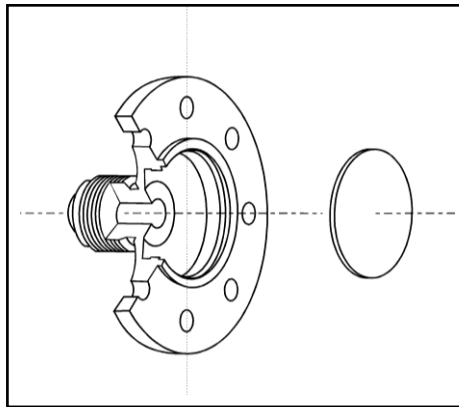
    Indicator threads for P/N 171-12-1 and 171-12-3 are 0.500-20UNJF-3A (male threads) per MS33656E5.

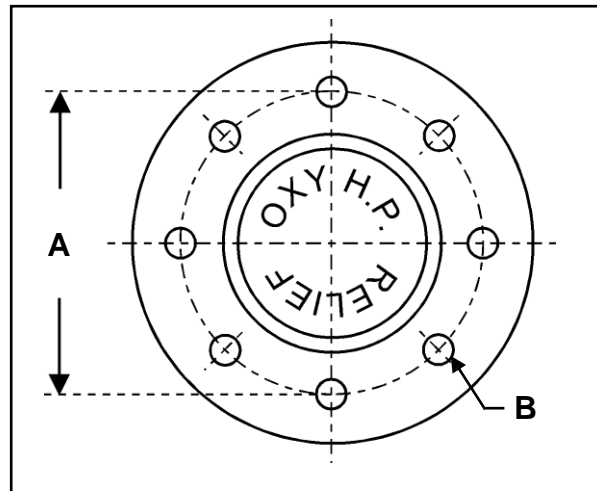   All thread dimensions noted above are in inches.

    (3) P/N 171-13

    Disc dislodges at 80 ±30 psig (0.55 ±0.21 MPa).

    Indicator threads for P/N 171-13 are 0.438-20UNJF-3A (male threads) per MS33656E4. Thread dimensions are in inches.

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Cutaway View
Figure 1

Reference Dimensions
(See Table 1)
Figure 2

Table 1
Reference Dimensions and Weights
(See Figure 2)

Indicator Part Number	Approximate Weight lbs. (gr.)	A diameter in. (cm)	B	
			Hole Quantity (equally spaced)	Hole Diameter in. (cm)
171-12	0.030 (13.6)	1.25 (3.18)	8	0.125 (0.318)
171-12-1	0.030 (13.6)	1.25 (3.18)	8	0.125 (0.318)
171-12-2	0.030 (13.6)	1.25 (3.18)	8	0.125 (0.318)
171-12-3	0.030 (13.6)	1.25 (3.18)	8	0.125 (0.318)
171-13	0.035 (15.9)	1.50 (3.81)	8	0.125 (0.318)

35-02-11

2. TESTING AND FAULT ISOLATION

Not applicable.

3. DISASSEMBLY

See Figure 3 for item numbers.

If necessary to disassemble indicator (1 thru -1D), proceed as follows.

Push disc (5, -5A) out from body (10 thru -10B) from threaded side of body. Discard disc. Disc cannot be reused.

4. CLEANING

See Figure 3 for item numbers.

If necessary to clean body (10 thru -10B), clean using same or equivalent procedure used to clean oxygen tubing that connects indicator to cylinder-mounted regulator or valve.

5. CHECK

See Figure 3 for item numbers.

Do not check a used disc (5, -5A). Disc cannot be reused. Check disc installed in body (10 thru -10B) for any sign of damage or defects.

Do a check of the body (10 thru -10B) for any sign of wear, damage or defects.

6. REPAIR

See Figure 3 for item numbers.

Do not repair disc (5, -5A). Disc cannot be reused. Replace a disc that shows any sign of damage or defect.

Replace a body (10 thru -10B) that shows any sign of wear, damage or defect.

7.   ASSEMBLY

See Figure 3 for item numbers.

Align the disc (5, -5A) over body (10 thru -10B) with the words "OXY H.P. RELIEF" on disc facing outward. Push the center of disc with finger or thumb until disc snaps into place in the body. Do not use lubricant.

Protect component from dirt and contamination during storage. Store any indicator (1 thru -1D), spare body (10 thru -10B) or spare disc (5, -5A) in a polyethylene bag (or equivalent) and heat seal the bag. Avoid storage in areas of very high temperature or humidity.
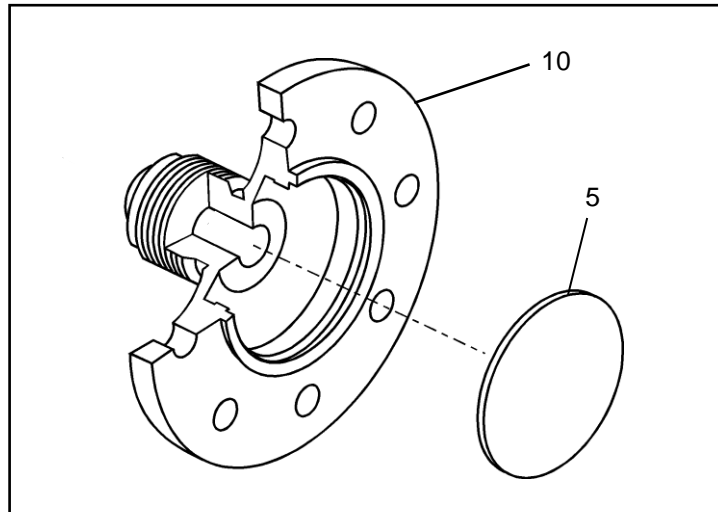

8.   FITS AND CLEARANCES

Not applicable.

9.   SPECIAL TOOLS, FIXTURES AND EQUIPMENT

Not applicable.

10. ILLUSTRATED PARTS LIST

Illustrated Parts List
Figure 3

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1 2 3 4 5 6 7	EFF. CODE	UNITS/ ASSY.
3					
1	171-12		INDICATOR, OVERBOARD DISCHARGE	A	RF
-1A	171-12-1		INDICATOR, OVERBOARD DISCHARGE	B	RF
-1B	171-12-2		INDICATOR, OVERBOARD DISCHARGE	C	RF
-1C	171-12-3		INDICATOR, OVERBOARD DISCHARGE	D	RF
-1D	171-13		INDICATOR, OVERBOARD DISCHARGE	E	RF
5	171-10		• DISC, REPLACEMENT	A, B, E	1
-5A	171-10-1		• DISC, REPLACEMENT, FLUORESCENT	C, D	1
10	171-11		• BODY, INDICATOR	A, C	1
-10A	171-11-1		• BODY, INDICATOR	B, D	1
-10B	10006026		• BODY, INDICATOR	E	1

- ITEM NOT ILLUSTRATED